Neovascular Age-Related Macular Degeneration Treatment Trial with Ranibizumab (MARINA)

THE LENS

Objective

To evaluate whether ranibizumab, an anti-VEGF antibody, improves patient outcomes and prevents vision loss in patients with neovascular age-related macular degeneration (nAMD).

Methods

Design: Multicenter RCT

Sample Size: 716

Treatment Groups:

- 238 to sham injection
- 238 to 0.3mg ranibizumab
- 240 to 0.5mg ranibizumab
- *PDT allowed if indicated*

Outcomes:

- Primary end point: Proportion of patients that lost fewer than 15 letters compared to their baseline visual acuity (VA) at 12 months
- Improvement of VA by 15 or more letters
- Mean increase in VA

Results

Point 1: Patients treated with ranibizumab exhibited less decline from baseline VA compared to sham-injections

- 94.5% of patients receiving 0.3mg and 94.6% of patients receiving 0.5mg lost fewer than 15 letters from baseline VA compared to the 62.2% that received sham injections ($P<0.001$)

Point 2: Patients treated with ranibizumab showed improved VA.

- Roughly 1/4 of patients receiving 0.3 mg and 1/3 of patients receiving 0.5mg injections gained 15 or more letter in VA compared with 5% or less of those in the sham-injection group ($P<0.001$)

Point 3: Mean VA with notable improvement for treatment groups

- Increase of 6.5 letters in the 0.3 mg Ranibizumab group
- Increase of 7.2 letters in the 0.5 mg Ranibizumab group
- Decrease of 10.4 letter decrease in the sham-injection group

TLDR: Treatment of nAMD with intravitreal ranibizumab prevented vision loss and improved mean VA in patients with minimally classic or occult choroidal neovascularization.

Rosenfeld PJ, Brown DM, Heier JS, et al. Ranibizumab for neovascular age-related macular degeneration. *N Engl J Med*. 2006;355(14):1419-1431. doi:10.1056/NEJMoa054481